

AMENDMENTS TO THE CLAIMS

Please amend the claims as follows:

1. (Currently amended) A method of enhancing the immunogenicity of an antigen in a mammal, the method comprising:

administering to the mammal intramuscularly, intravenously, transdermally or subcutaneously, a fusion protein comprising an antigen linked by a polypeptide bond to an immunoglobulin heavy chain constant region whose ability to bind an Fc receptor is not modified by mutation, ~~linked by a polypeptide bond to the antigen~~ thereby to elicit an immune response against the antigen, wherein the fusion protein lacks an immunoglobulin variable domain and the antigen is selected from the group consisting of Prostate-Specific Membrane Antigen a prostate-specific membrane antigen, an ectodomain of a cytokine receptor, a viral protein and a tumor-specific protein, the antigen of the fusion protein eliciting a stronger immune response in the mammal than the antigen alone.

2. (Previously amended) The method of claim 1, further comprising administering the fusion protein in combination with an adjuvant in an amount sufficient to enhance the immune response against the antigen of the fusion protein relative to the immune response against the antigen of the fusion protein administered without the adjuvant.

3. (Original) The method of claim 2, wherein the fusion protein and adjuvant are administered simultaneously.

4. (Original) The method of claim 2, wherein the adjuvant comprises a fusion protein comprising an immunoglobulin heavy chain constant region linked by a polypeptide bond to an adjuvant protein.

5. (Original) The method of claim 1 or 4, wherein the immunoglobulin heavy chain constant region comprises an immunoglobulin hinge region.

6. (Original) The method of claim 5, wherein the immunoglobulin heavy chain constant region comprises an immunoglobulin heavy chain constant region domain selected from the group consisting of a CH2 domain, a CH3 domain, and a CH4 domain.

7. (Original) The method of claim 5, wherein the immunoglobulin heavy chain constant region comprises a CH2 domain and a CH3 domain.

8. (Currently amended) The method of claim 1 or 4, wherein the immunoglobulin heavy chain constant region is ~~defined by an amino acid sequence corresponding to an amino acid sequence defining~~ an immunoglobulin heavy chain constant region present in the same species as the mammal.

9. (Currently amended) The method of claim 8, wherein the ~~amino acid sequence defining the~~ immunoglobulin heavy chain constant region ~~corresponds to~~ is a human immunoglobulin heavy chain constant region.

10. (Canceled)

11. (Original) The method of claim 4, wherein the adjuvant protein is a cytokine.

12. (Currently amended) The method of claim 11, wherein the cytokine is ~~defined by an amino acid sequence corresponding to an amino acid sequence defining~~ a cytokine present in the same species as the mammal.

13. (Original) The method of claim 12, wherein the cytokine is a human cytokine.

14. (Original) The method of claim 1, wherein the mammal is a human.

15. (Currently amended) A composition for eliciting an immune response against an antigen in a mammal, the composition comprising ~~an admixture for intramuscular, intravenous, transdermal or subcutaneous administration selected from the group consisting of:~~

(a) an adjuvant; and

an antigen fusion protein comprising an antigen linked by a polypeptide bond to an immunoglobulin heavy chain constant region whose ability to bind an Fc receptor is not modified by mutation ~~the antigen admixed with an adjuvant~~, wherein the antigen fusion protein lacks an immunoglobulin variable domain and the antigen is selected from the group consisting of Prostate-Specific Membrane Antigen ~~a prostate-specific membrane antigen~~, an ectodomain of a cytokine receptor, a viral protein and a tumor-specific protein,

the composition being formulated for intramuscular, intravenous, transdermal or subcutaneous administration. ; and

~~(b) — an antigen fusion protein comprising an immunoglobulin heavy chain constant region linked by a polypeptide bond to the antigen, wherein the antigen is selected from the group consisting of a prostate-specific membrane antigen], an ectodomain of a cytokine receptor, a viral protein and a tumor-specific protein, admixed with an adjuvant fusion protein comprising an immunoglobulin heavy chain constant region linked by a polypeptide bond to an adjuvant protein.~~

16. (Currently amended) The composition of claim 15, wherein the adjuvant of ~~clause (a)~~ comprises a fusion protein comprising an immunoglobulin constant region linked by a polypeptide bond to an adjuvant protein.

17. (Canceled)

18. (Previously amended) The composition of claim 15 or 16, wherein the immunoglobulin heavy chain constant region comprises an immunoglobulin hinge region.

19. (Original) The composition of claim 18, wherein the immunoglobulin heavy chain constant region comprises an immunoglobulin heavy chain constant region domain selected from the group consisting of a CH2 domain, a CH3 domain, and a CH4 domain.

20. (Original) The composition of claim 18, wherein the immunoglobulin heavy chain constant region comprises a CH2 domain and a CH3 domain.

21. (Original) The composition of claim 15, wherein the adjuvant comprises an oligonucleotide CpG sequence.
22. (Canceled)
23. (Canceled)
24. (Currently amended) The composition of claim 15, wherein the adjuvant comprises of clause (a) or the adjuvant protein of clause (b) is a cytokine.
25. (Original) The composition of claim 24, wherein the cytokine is a human cytokine.
26. (Currently amended) The composition of claim 15 or 16, wherein the immunoglobulin heavy chain constant region is ~~defined by a amino acid sequence corresponding to an amino acid sequence defining~~ a human immunoglobulin heavy chain constant region.
- 27-46. (Canceled)
47. (New) The composition of claim 16, wherein the adjuvant protein is a cytokine.